June 5, 2014

Bob Mahood
Executive Director
South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
Charleston, SC 29405

Re: South Atlantic Snapper-Grouper Visioning Project Comments

Dear Mr. Mahood,

On behalf of The Pew Charitable Trusts, please accept these comments for consideration in the Council Visioning Project currently under way for the snapper-grouper fishery. The Visioning Committee identified four overarching strategic goals addressing management, science, communication, and governance. These comments offer Pew's vision for the fishery and address the first two goals.

Our Vision Statement: South Atlantic snapper and grouper populations are abundant; ocean ecosystems are healthy; and coastal communities that depend on these resources are thriving.

If the Council is successful in its strategic planning process and implementing regulatory measures to achieve this vision, the result should be ample opportunities to catch, eat, and enjoy Council-managed fish in the South Atlantic through recovery and wise stewardship of the region's marine resources. To achieve this goal, we recommend the following key objectives:

Strategic Goal 1 (Management):

- **Objective 1:** Prevent overfishing and rebuild overfished stocks.
- **Objective 2:** Incorporate ecosystem-based fishery management (EBFM) as an explicit fishery management plan (FMP) objective and develop ecosystem-based management goals, operational objectives and performance measures through the revised fishery ecosystem plan (FEP) for subsequent regulatory amendments.
- **Objective 3:** Require essential information to be gathered and analyzed before new fisheries or gears are authorized or existing fisheries expand into new areas.
- **Objective 4:** Explore management tools that better align recreational fishing effort with available resources.

Strategic Goal 2 (Science):

- **Objective 1:** Build a robust data collection, catch monitoring and bycatch reporting system to support management objectives and information needs for preventing overfishing, rebuilding overfished stocks, and accounting for bycatch and discard mortality.
- **Objective 2:** Improve the Snapper-Grouper FMP's procedures for specifying and adjusting catch limits to achieve a more efficient, predictable and timely process for compiling, reviewing and transmitting best scientific information available in the catch-setting process.

These objectives reflect the importance of continuing to improve the implementation of the Magnuson-Stevens Fishery Conservation and Management Act's (MSA) core standards and requirements while recognizing that fisheries sustainability is ultimately tied to the health and productivity of the ecosystem.[1] Indeed, fisheries are one of the most visible ecosystem services marine environments provide.[2] An ecosystem-based approach to management must be an overarching objective. Broadly speaking, the goal of such an approach is to maintain healthy ecosystems and preserve the natural diversity of populations, species, and biological communities so as not to jeopardize a wide range of goods and services provided by a healthy ecosystem, including food, revenue, and recreation for humans.[3] Protecting essential habitats, minimizing bycatch and waste, and conservative management of forage species are examples of specific management actions that can achieve these goals and objectives, using management tools that are already familiar and available to the Council.

Protecting marine ecosystems and minimizing the risk of irreversible change to vital ecosystem functions and processes are not only basic tenets of EBFM,[4] they are recognized as core goals of conservation and management under the MSA.[5] We believe the time has come to recognize EBFM as an explicit objective of the Snapper-Grouper FMP. The Visioning Project provides a logical opportunity to outline a strategy for the development of specific ecosystem goals, operational objectives, and performance measures that will be incorporated into the FMP over time through subsequent amendments and other regulatory action.

The following comments elaborate on each of the key objectives under Strategic Goals 1 and 2.

Strategic Goal 1: Management

- *Adopt management strategies that rebuild and maintain fishery resources, adapt to regional differences in the fishery, and consider the social and economic needs of fishing communities.*

The Snapper-Grouper FMP includes a diverse assemblage of 60 reef fish species with life history and behavioral characteristics that make them highly susceptible to overexploitation, including long

[1] For definition of "**healthy ecosystem,**" see 50 CFR § 600.815(a): an ecosystem in which productive capacity and habitat is maintained, diversity of the flora and fauna is preserved, and the system retains the ability to regulate itself. Such an ecosystem should be similar to undisturbed ecosystems with regard to productivity, nutrient dynamics, trophic structure, species richness, stability, resilience, contamination levels, and the frequency of diseased organisms.
[2] NOAA's Next Generation Strategic Plan, December 2010, p. 18. Available at: http://www.ppi.noaa.gov/wp-content/uploads/NOAA_NGSP.pdf.
[3] National Research Council (1999), *Sustaining Marine Fisheries*, Washington, DC: National Academy Press, 164 pp.
[4] See, for instance: NMFS (1999), NRC (1999), Pikitch *et al*. (2004), and USCOP (2005).
[5] MSA § 3(5), 16 U.S.C. 1802(5).

lifespan, large adult size, late maturity, protogyny, and spawning in predictable locations.[6] Because these species are extremely vulnerable to rapid overfishing when relying solely on conventional management measures, sustainability depends on accounting fully for ecosystem considerations such as habitat needs, food web interactions, and the functional roles that species play in maintaining ecosystem health. Explicitly recognizing EBFM as an FMP objective and proactively incorporating ecological factors into regulatory processes (e.g., stock assessments and the catch specification process) are essential to achieve success.

Objective 1: Prevent overfishing and rebuild overfished stocks

Overfishing was identified as a core problem and impetus for the original Snapper-Grouper FMP in 1983,[7] and has remained a chronic problem for three decades. Although the Council has made progress in reducing overfishing in recent years, the South Atlantic still had more stocks subject to overfishing than all but one other regional fishery management council (New England) in 2013,[8] and many have experienced chronic overfishing for years.[9] The economic costs of overfishing are considerable: Ecotrust (2011) calculated that South Atlantic commercial fishermen realized only 57% of the potential value for these species due to overfishing, based on an analysis of the costs of lost catch and foregone revenues for overfished black sea bass, red grouper, red porgy, red snapper and snowy grouper – a catch loss valued at $2.9 million per year in 2009.[10] The ecological costs of overfishing are often overlooked and poorly quantified, but could be extensive.[11]

Effective spatial-temporal management of annual catch limits (ACLs) is a critical component to ending overfishing and rebuilding overfished populations. Time and area-based regulations address the shortcomings of relying solely or principally on *how much* fishing to permit without also considering *when*, *where*, and *how* the ACL is taken. Apportioning ACLs by seasons and areas can be used to achieve multiple management objectives to prevent overfishing, reduce bycatch, protect sensitive habitats, address competition among fishery sectors, avoid localized and serial depletions of fished populations, and ensure geographic and seasonal availability of prey to key predators. Marine protected areas (MPAs), Special Management Zones (SMZs), and other spatial protections, along with seasonal allocation of ACLs (including spawning season closures), are essential elements of EBFM.

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[6] Felicia C. Coleman *et al*. (2000), *Long-lived reef fishes: the grouper-snapper complex*, Fisheries 25: 14-20; George R. Sedberry et al. (2006), Spawning Locations for Atlantic Reef Fishes off the Southeastern U.S., GCFI 57: 465-514.

[7] South Atlantic Fishery Management Council (1983), Fishery Management Plan (FMP) for the Snapper-Grouper Fishery of the South Atlantic, Summary, p. vi. Available at: http://www.safmc.net/Portals/6/Library/FMP/SnapGroup/SnapGroupFMP.pdf.

[8] Source: NMFS Status of U.S. Fish Stocks in 2013, available at: http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/status_updates.html.

[9] Gag grouper, black sea bass, red grouper, red snapper, speckled hind, warsaw grouper and snowy grouper all experienced overfishing in every national assessment from 1998 through 2012, while vermilion snapper, golden tilefish and black grouper experienced overfishing in 80-90% of those years. Source: NMFS Status of U.S. Fish Stocks, 1998-2012. Annual reports available at: http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm.

[10] Taylor Hesselgrave *et al*. (2011), *The Hidden Cost of Overfishing to Commercial Fishermen: A 2009 Snapshot of Lost Revenues*, Final Report, Ecotrust, 22p.

[11] For instance, see NMFS (2009), *Our Living Oceans, 6th Edition*, NOAA Tech. Memo. NMFS-F/SPO-80, p. 161. Available at: http://spo.nmfs.noaa.gov/olo6th-edition.htm.

Objective 2: Incorporate EBFM as an explicit FMP objective and develop EBFM goals, operational objectives, and performance measures through the FEP II for subsequent regulatory amendments

The MSA recognizes the importance of protecting marine ecosystems, encourages the incorporation of ecosystem principles in fisheries management, and gives the Councils ample authority to pursue EBFM.[12] The National Standard 1 (NS1) guidelines (74 FR 3178) require Councils to identify the ecological factors relevant to management of a particular stock, stock complex, or fishery, and document how they were accounted for when determining the optimum yield (OY) for a fishery.[13] Concerning ecological factors, the NS1 Guidelines give the Councils wide latitude to reduce allowable fishing rates from the maximum allowable level to address fishing impacts on ecosystem component (EC) species, forage fish stocks, predator-prey dynamics, competitive interactions, marine mammals and birds, and threatened or endangered species.[14] In addition, the guidelines for conservation of essential fish habitat (EFH) require, where possible, that Councils consider ecological relationships and take an ecosystem approach in determining the EFH of a managed species.[15] Councils are also authorized to protect vulnerable marine habitats and non-target species in their own right as important components of the marine ecosystem.[16]

The South Atlantic Council has taken important steps in this direction in recent years by adopting a network of eight MPAs in Snapper-Grouper Amendment 14 to aid in the recovery of overfished deepwater snapper-grouper species,[17] and by establishing Deepwater Coral Habitat Areas of Particular Concern (HAPC) encompassing 24,215 square miles of seabed where the use of most bottom-tending fishing gears is prohibited (75 FR 35330). The South Atlantic FEP, which evolved from the Council's Habitat Plan of 1998, has served as a source document for Comprehensive Ecosystem-Based Amendments (CE-BAs) and provided a vehicle for implementing the Council's updated EFH-HAPC designations, including the Deepwater Coral HAPCs in 2010. Up to now, the FEP has not formally recognized EBFM as an objective and the Council has not explicitly addressed wider ecosystem concerns such as food web interactions or oceanographic and climate impacts on the fisheries. No formal system of ecosystem indicators or other metrics has been developed for monitoring and evaluating ecosystem trends or management actions over time.

The Visioning Project should seek to formalize and expand the integration of ecosystem considerations in management decisions by (1) recommending the explicit recognition of EBFM as an overarching objective of the FMP, and (2) recommending that the revised FEP develop explicit ecosystem policy goals, measurable indicators of ecosystem status or health, and management

[12] For instance, the reauthorized MSA of 1996 tasked NMFS to develop recommendations "*to expand the application of ecosystem principles in fishery conservation and management activities*" (16 U.S.C. § 1882). The MSA's definition of conservation and management recognizes the importance of protecting marine ecosystems and avoiding irreversible or long-term adverse effects on fishery resources and the marine environment (16 U.S.C. § 1802(5)), and MSA's definition of Optimum Yield (OY) authorizes reductions in fishing levels from the maximum allowable level to account for social, economic and ecological factors (16 U.S.C. § 1802(33)(B)).
[13] 50 CFR § 600.310(e)(3)(ii).
[14] 50 CFR § 600.310(e)(3)(iv)(C).
[15] See 50 CFR 600.815(a)(1)(iv)(E).
[16] 16 U.S.C. § 1853(b)(12).
[17] *See*: Final Rule for S-G Amendment 14, 74 FR 1621. Also see: http://www.safmc.net/Portals/6/Library/MPAdeepwaterbrochure.pdf. The Council's stated purpose in establishing these MPAs was "*to protect a portion of the long-lived, deepwater snapper grouper species and their habitat from directed fishing pressure" and "to protect the size, age, and genetic structure of the populations of deepwater species that are susceptible to overfishing*."

reference points that can be used to evaluate management performance relative to ecosystem goals (e.g., setting more conservative biomass targets for forage fish that leave more prey in the water for predators). There is considerable scientific research on ecosystem indicators and applications are not new conceptually. Indicators are already used in many fields to simplify the measurement, analysis, monitoring, and communication of complex information. Examples include percent forest cover in natural resource management, body mass index in medicine, and gross domestic product in economics.

This is also an opportunity to recommend new initiatives such as identifying predator/prey interactions and major forage species that may warrant special management consideration and account for emerging non-fishing threats such as climate change, ocean acidification, invasive species and expanding hypoxic dead zones. The primary goal should be to ensure that the regulatory framework of the Snapper-Grouper FMP is designed to avoid degradation of essential ecosystem functions and processes that sustain the productivity of fishery resources in order to maintain long-term socioeconomic benefits.

Objective 3: Require essential information to be gathered and analyzed before new fisheries or gears are authorized or existing fisheries expand into new areas.

For decades, the primary mission of U.S. fisheries management was the development of our fisheries, and in the 1950s and 1960s the federal government's role was to encourage the growth of the fishing industry.[18] As a result, fisheries often developed on new species, expanded into unfished ocean waters, or utilized new fishing gears with little or no prior analysis of their impacts and without first establishing baselines of abundance for species in the pre-fishing environment. This practice has contributed to overfishing of many South Atlantic species and other unintended consequences. For instance, thirteen species in the snapper-grouper complex were already in a documented state of growth overfishing by the time the Snapper-Grouper FMP was developed in 1983.[19]

Currently, a fishery can begin in the region without adequate information about its potential impacts on the ecosystem or management measures to prevent overfishing and habitat damage. Going forward, evaluation of a new target species' abundance, reproductive rate, role in the food web, potential impacts of fishing, and other factors should be fully considered before allowing new fisheries to commence and an appropriate management framework established. In 2009, for instance, the North Pacific Fishery Management Council adopted this approach as it developed a fishery management plan for Arctic waters. Therefore, as a policy, the Council should pursue a "start smart" approach and recommend that no new directed snapper-grouper fisheries will be developed unless and until basic scientific data have been collected, analyzed, and appropriately incorporated in new or revised fishery management plans to ensure that fish populations are not over-exploited by the onset of fishing activities.

[18] Michael L. Weber (2002), *From Abundance to Scarcity: A History of U.S. Marine Fisheries Policy*, Island Press, Washington, DC, p. 16.
[19] South Atlantic Fishery Management Council (1983), Fishery Management Plan (FMP) for the Snapper-Grouper Fishery of the South Atlantic, Summary, p. vi. Available at: http://www.safmc.net/Portals/6/Library/FMP/SnapGroup/SnapGroupFMP.pdf.

Objective 4: Explore management tools that better align recreational fishing effort with available resources

Current management of recreational saltwater fisheries focuses on controlling landings of individual fishermen without restricting the number of individuals allowed to fish or the number of times an individual goes fishing. The number of angler trips in the South Atlantic grew from an average of 15 million annually in the 1980s to 17 million annually in the 1990s to more than 20 million annually in the period 2000-2008.[20] Such sustained increases in fishing effort pose serious challenges to efforts to end overfishing and rebuild overfished stocks because limits on the number of fish landed per fishing trip will not prevent the ACL from being exceeded if the total number of fishing trips continues to increase. To achieve the FMP's objectives, it is essential to address the dramatic growth in participation in these fisheries.

The Council must address this critical problem in a manner that provides recreational fishing opportunities while recognizing that unlimited participation and trips is not sustainable. The visioning process should identify available options for controlling recreational participation and effort in both the for-hire and private components of the fishery. This would include consideration of the establishment of a tag program that would allow tag holders to catch a specified number of species each year, as has been proposed through S-G Amendment 22 for deep water species with low ACLs (e.g., snowy grouper). However, there are a number of other management tools available, and we encourage the Council to develop an approach that is tailored to best meet the needs of anglers and managers in the South Atlantic region.

Strategic Goal 2: Science

- *Management decisions are based on robust, defensible science that considers qualitative and quantitative data analyzed in a timely, clear, and transparent manner that builds stakeholder confidence.*

Achieving long-term sustainability and improving stakeholder confidence in the science used to manage the fishery will require significant improvements in the information infrastructure that supports science and management, including better monitoring of catches (landings and discards), more timely reporting of catches, a transparent, orderly process for reviewing and transmitting the best scientific information to managers and stakeholders, and mechanisms for adjusting ACLs and other management measures that minimize regulatory delay where possible.

Objective 1: Build a robust data collection, catch monitoring, and bycatch reporting system to support management objectives and information needs for preventing overfishing, rebuilding overfished stocks, and accounting for bycatch and discard mortality

Limited fishery data, lack of catch monitoring, uncertain compliance with reporting requirements, and unknown levels of bycatch and discard mortality have been endemic problems in the South Atlantic for too long, undermining the Council's efforts to put its fisheries on a more sustainable and stable path. Recent Council regulatory initiatives to require weekly electronic reporting in the

[20] MRFSS/MRIP estimates for the South Atlantic. Source: NMFS Fisheries Statistics Division (August 12, 2013), available at: http://www.st.nmfs.noaa.gov/recreational-fisheries/access-data/run-a-data-query/queries/index.

Generic Dealer Amendment and the Generic Headboat/Charterboat Reporting Amendment (78 FR 78779) would streamline and improve reporting timeliness of commercial and for-hire landings data, thereby improving ACL management in the commercial fisheries. These are much-needed and encouraging developments, but more needs to be done to verify and validate self-reported data, develop reliable measures of fishing effort, and implement a robust bycatch and discard reporting methodology.

A strategy for implementing a fully operational standardized bycatch and discard reporting methodology must be a high priority going forward. Full accounting of all sources of bycatch and discard mortality is essential to prevent overfishing and is required by law.[21] The South Atlantic's reliance on traditional management controls such as bag limits, trip limits, and size limits creates regulatory discards and incentives for high-grading, but the Snapper-Grouper FMP lacks an effective, fully operational system for monitoring, reporting, and accounting for bycatch and discard mortality as required under the MSA. Bycatch and discards are currently monitored in accordance with the Bycatch Monitoring Program standards of the Atlantic Coastal Cooperative Statistics Program (ACCSP), but actual implementation of the standards is limited by inadequate funding.[22] Even with full implementation, ACCSP's standards would be considered *minimum standards* by any measure.

The Council should review recent initiatives and outline a strategy for implementing the missing pieces of a comprehensive catch accounting and reporting system in the South Atlantic. The first step is a needs assessment that engages end-users of the data to identify what sources of fishery-dependent information are needed for stock assessments and scientific recommendations. The second is to identify priority Council actions addressing each of the major fishery sectors (for-hire, private, commercial) that will provide this data stream for assessment scientists, science advisors, and the Council. Opportunities to leverage cooperative research to obtain commercial and recreational bycatch and discard data should also be identified and pursued wherever possible to fill information gaps. The Council should look for new and innovative ways to improve data collection using emerging technologies and envision a future where state-of-the-art electronic monitoring and reporting technologies are fully integrated into NOAA Fisheries data collection systems to meet science and management needs in an efficient, cost-effective manner.

Objective 2: Improve the S-G FMP's procedures for specifying and adjusting catch limits to achieve a more efficient, predictable, and timely process for compiling, reviewing, and transmitting the best scientific information available in the catch-setting process

ACL-setting is a stepwise process with specific required steps to compile, review, and transmit the best scientific information available for purposes of determining ABCs and ACLs. These must adequately account for scientific and management uncertainties associated with them and the biological, socioeconomic, and ecological impacts of those fishing levels, and each FMP must

[21] See 16 U.S.C. §§ 1851(a)(9) and 1853(a)(11) and (12). Also see the National Standard 1 Guidelines at 50 C.F.R. § 600.310(f)(2)(i) (requiring that ACLs and AMs must account for the total quantity of fish taken, including the mortality of fish that are discarded) and House Report 104-171 on H.R. 39, p. 27: "*The committee intends that reduction of bycatch should be a goal of all Fishery Management Plans…While the Committee recognizes that it will be very difficult to eliminate all bycatch, it is clear that Councils and fishermen should continually look for innovative ways to make significant reductions in bycatch and in the mortality of discards*."

[22] *See* Comprehensive Ecosystem-Based Amendment 3 Decision Document (SAFMC, February 12, 2013), Table 1, p. 6, for details on observer coverage levels, logbook reporting requirements, angler intercept surveys and other elements of the ACCSP standards.

establish clear administrative procedures for that process.[23] In Councils with a longer history of ACL management, the catch specification process itself has become an overarching "routine" that occurs on a regular schedule every 1-3 years over the course of a pre-established number of Council meetings. By contrast, the South Atlantic Council currently implements catch specifications for an indefinite period of time through a regulatory framework amendment for each individual stock or stock complex as new information becomes available from SEDAR, a process that has contributed to an atmosphere of crisis management lamented by the Snapper-Grouper Committee and others.

The Visioning Project is a good opportunity to consider improvements to, and restructuring of, the process by which the Council establishes its recommended ABCs, ACLs, and ACTs for Secretarial review. The Council should recommend a review of best practices for catch specifications in other regions and outline a strategy for modifying the FMP's procedures to make the process more predictable, less crisis-driven, and better able to make timely adjustments to catch limits with a minimum of regulatory delay when new information becomes available. Such procedures should be fully consistent with the provisions of the recently revised NS2 guidelines (78 FR 43066), which incorporate the National Research Council's recommended criteria for the evaluation of Best Scientific Information Available (BSIA), federal guidelines on the role of peer review in determining BSIA, and requirements for the preparation of Stock Assessment and Fishery Evaluation (SAFE) reports, which should serve as vehicle for transmitting the best available science used in the catch specification process.

Conclusion

At the September 2012 Council meeting, the Snapper-Grouper Committee expressed frustration with the chronic crisis mode of management in which they find themselves and voiced a desire to initiate a process that would allow them to think strategically about the long-term objectives, structure, and direction of the fishery. We support the Council's Visioning Project as an opportunity to take a proactive rather than a reactive approach to the social, economic, and ecological challenges that threaten the long-term health and abundance of these fisheries, much in the way the Mid-Atlantic Council's strategic planning process has done.[24] We look forward to working with the Council to develop a long-range vision and plan that addresses all of these issues going forward, with the aim of achieving robust, sustainable fisheries for the present and for future generations.

Sincerely,

Leda A. Dunmire
Manager, U.S. Oceans, Southeast
The Pew Charitable Trusts

[23]The MSRA requires *a mechanism* for specifying ACLs and AMs (16 U.S.C. § 1853(a)(15)) and the design of that mechanism (the catch specification process) is crucial to the successful implementation of the resulting ABCs, ACLs, and AMs. Regulatory guidance on the required elements of that process is included in NS1 guidelines (50 CFR § 600.310) and NS2 guidelines (50 CFR § 600.315), as well as the NOAA Operational Guidelines. NMFS also recommends that Councils modify their Statement of Organization, Practices and Procedures (50 CFR § 600.115) to describe the roles and responsibilities of the Council, SSC, and any peer reviewers in this process.

[24] See the Mid-Atlantic Fishery Management Council, *2014-2018 Strategic Plan* (Aug. 2013). Available at: http://www.mafmc.org/newsfeed/2013/august/council-completes-strategic-plan.